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REMARKS

Applicants' attorney thanks the Examiner for his comments. Independent Claim 1 has been amended to indicate that the hydrophilic soft polymer is crosslinked with an acrylate or methacrylate ester having an alkoxysilane functionality. The amendment is supported on page 8, lines 13-17. What this means is that the crosslinking agent itself is a soft material, namely one containing acrylate or methacrylate ester having an alkoxysilane functionality. The use of the claimed crosslinking agent with the hydrophilic soft polymer provides a damage-resistant superabsorbent material having the improved properties recited in the claims. This is how Applicants' Examples were performed. See page 17, line 23 – page 20, line 8.

Additionally, amended Claim 1 replaces the words "non-particulate solution" with "coating." This is supported on page 7, lines 10-12.

a) Claim Rejection Based On Engelhardt

The rejection of Claims 1-21 and 29-35 under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,414,214 ("Engelhardt") is respectfully traversed.

The Examiner alleges that Engelhardt discloses a superabsorbent material treated with a solution including a hydrophilic soft polymer having an alkoxysilane functionality (Office Action, page 4). While Engelhardt states that "alkoxysilyl compounds" may be used as a postcrosslinker, there is no suggestion of a coating including a hydrophilic soft polymer crosslinked with an acrylate or methacrylate ester having an alkoxysilane functionality (Col. 8, lines 17-21).

Furthermore, the use of the simple crosslinking agents disclosed in Engelhardt apparently does not result in a damage-resistant superabsorbent material having the properties recited in Applicants' claims. Engelhardt teaches:

> The surface postcrosslinking heat treatment step provides hydrogel-forming polymers having a very low residual moisture content, typically of less than 1% by weight, frequently even less than 0.5% by weight. It is believed that a low residual moisture content increases the

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> brittleness of hydrogel-forming polymers, so that these products have only low mechanical stability (Col. 8, line 64 – Col. 9, line 3).

Engelhardt attempts to increase the mechanical stability by adding moisture to the superabsorbent material (Col. 9, lines 3-8). Applicants' invention does not require this. Applicants' invention is a damage-resistant superabsorbent material having the properties and composition as claimed, and does not require added moisture to achieve the damage-resistant properties.

Put another way, the superabsorbent material recited in Claim 1 requires two structural elements, namely:

1) a superabsorbent material,
2) treated with a coating including a hydrophilic soft polymer crosslinked with an acrylate or methacrylate ester having an alkoxysilane functionality.

Engelhardt discloses only the underlying superabsorbent material and indicates that it may be surface postcrosslinked using an alkoxysilyl compound. A mere "alkoxysilyl compound" is not suggestive of "a hydrophilic soft polymer crosslinked with an acrylate or methacrylate ester having an alkoxysilane functionality." This rejection should be withdrawn.

b) Claim Rejections Based On Herfert Or Inger

The rejection of Claims 1-21 and 29-35 under 35 U.S.C. § 102(e) as anticipated by, or under 35 U.S.C. § 103(a) as obvious over either U.S. Publication 2005/0245393 ("Herfert") or U.S. Publication 2004/0071966 ("Inger") is respectfully traversed.

Herfert discloses surface-crosslinked superabsorbent polymer particles having clay in the vicinity of the surfaces (Abstract). As explained in paragraph 0098, the surface crosslinker may be a hydrophilic polymer, such as a polyalkylene glycol, or an alkoxysilane compound, or one of the other materials listed. However, there is no disclosure of an underlying superabsorbent material treated with a coating that includes

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1) a hydrophilic soft polymer, 2) crosslinked with an acrylate or methacrylate ester, 3) having an alkoxysilane functionality. Hydrophilic polymers crosslinked with acrylate or methacrylate ester-containing compounds are not suggested by this reference.

The primary objective of Herfert (as well as Engelhardt, discussed above) is to provide a crosslinking agent which merely crosslinks the surface of the underlying superabsorbent material. The hydrophilic soft polymer coating of the invention differs in that it forms a distinct crosslinked coating over and above the superabsorbent material. In other words, it crosslinks to itself to form a strong protective coating (page 7, line 19 – page 8, line 17). While the claims do not preclude some reaction between the coating and the underlying superabsorbent material, such a reaction is not what the invention is about. A separate hydrophilic polymer protective coating, which crosslinks to itself, provides better damage resistance than an agent that merely crosslinks the surface of an underlying superabsorbent material.

Applicants' claims are tailored to recite a distinct hydrophilic soft polymer coating crosslinked with an acrylate or methacrylate ester having an alkoxysilane functionality. There would be no motivation to use such a tailored polymer if the objective were merely to crosslink the surface of a superabsorbent material, as described in Herfert or Engelhardt. A simple crosslinking agent would achieve the objectives of the prior art references.

Inger similarly discloses superabsorbent polymers that are crosslinked on the surface. The surfaces may be crosslinked using alkoxysilyl compounds as disclosed in paragraph 0019, or another crosslinking agent. Again, this is not the same as applying a separate hydrophilic polymer coating and crosslinking the coating as required by Applicants' claims. Inger does not disclose or suggest a superabsorbent material treated with a coating including a hydrophilic soft polymer crosslinked with an acrylate or methacrylate ester having an alkoxysilane functionality.

Accordingly, this rejection should be withdrawn.

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c) Conclusion

Applicants believe that the claims, as presented, are in condition for allowance. If the Examiner detects any unresolved issues, then Applicants' attorney respectfully requests a telephone call from the Examiner, and a telephone interview.

Respectfully submitted,

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